REMARKS

I. Status of the Claims:

Claims 37-40 and 48-61 are pending in this application.

II. Rejections under 35 U.S.C. § 103:

Claims 37-40, 48-55, 57-58 and 60 are rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Arimoto et al. (US 5,371,613), Orito (US 6,072,912), Holub (US 6,043,909) and Irie (US 5,644,409). Claims 59 and 61 are rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Arimoto et al., Orito, Holub, Irie and Usami (US 5,960,110).

Claim 37 is directed to an arrangement in which the image sensor separately reads out image signals from a plurality of photoreceptive pixels via a plurality of output channels. The memory temporarily stores the image signals output from the output channels. The reference level acquisition unit is adapted to acquire a first reference level based on the image signals read from the memory when the image sensor reads a white member, and to acquire a second reference level based on the image signals read from the memory when the image sensor reads a reference density member having a predetermined density of half tone. The first reference level is a maximum of signal levels read out via the plurality of output channels when the white member is scanned, and the second reference level is a minimum of signal levels read out via the plurality of output channels when the reference density member is scanned.

Further, the adjustment setting unit sets adjustment data for each channel based on the acquired first and second reference levels. Finally, the plurality of adjustment units, respectively corresponding to the plurality of output channels, are each adapted to adjust levels of the image signals output from the output channels according to the set adjustment data for

each channel so as to substantially correspond with the first reference level when the image sensor reads the white member, adjust levels of the image output from the output channels according to the set adjustment data for each channel so as to substantially correspond with the second reference level when the image sensor reads the reference density member, and adjust levels of the image signals output from the output channels according to the set adjustment data for each channel so as to substantially correspond with a level obtained by interpolating between the first and second reference levels when the image sensor reads an image having a density other than the density of the white member and the reference density member. The plurality of adjustment units operate to match the linearity of the plurality of channels of the image sensor to a common linearity.

In general, the claimed arrangement provides an approach to match the linearity of a plurality channels of an "image sensor", such as for example a linear image sensor which outputs charges accumulated in pixels in a right-side area and a left-side area using different channels.

As acknowledged by the Examiner, Arimoto and Orito are silent as to the claimed adjustment setting unit and the operation to match the linearity of the plurality of channels of the image sensor to a common linearity. The Examiner appears to rely upon Holub as teaching these aspects.

However, Holub as relied upon by the Examiner discusses with respect to Fig. 4 B color transformation in imagicals 14 into uniform color space. Imagicals (e.g., imaging colorimeter) 14 output measurement signals R, G and B which are passed through compensation function LUTs 48 to provide linearized signals R_{lin}, G_{lin} and B_{lin}. Holub shows some form of linearization of color signals outputted from a colorimeter and but not any linearization of signals

for example from an image detector or sensor of a colorimeter. As such, Holub is still silent as to any matching of plurality of channels of an image sensor to a common linearity. Thus, Holub is silent as to the plurality of adjustment units operating to match the linearity of the plurality of channels of the image sensor to a common linearity. The remaining reference Irie does not remedy this deficiency in the Holub teaching.

Furthermore, none of the cited references relate to an "image sensor" with a plurality of output channels or disclose or suggest linearity issues when an image sensor with a plurality of output channels is employed. The newly cited Holub shows linearization of output color signals from an imagical, e.g., colorimeter, and not for any multi-channel "image sensor". As best understood, this claimed aspect is alleged in the Office Action to be taught by Orito at column 5, lines 9-14, which describes the following:

> The image reading-and-transferring system 1 is for transferring the image data in parallel from the image scanner 30 to the host computer 10 according to IEEE1284 communication interface standards.

This cited portion of Orito simply discusses the transfer of image data from the scanner 30 to a host computer 10, and is silent as any image sensor which separately reads out image signals from a plurality of photoreceptive pixels. As further described in Orito, the image sensor 54 of Orito serially produces a set of analog data. See e.g., col. 6, lines 20-26.

According, claim 37 and its dependent claims are believed to be distinguishable over the cited references. Reconsideration and allowance of the claims are respectfully requested.

CONCLUSION

Based on the foregoing remarks, the Applicant respectfully requests reconsideration and withdrawal of the rejection of claims and allowance of this application.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. 13-4500, Order No. 1232-4676.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. 13-4500, Order No. 1232-4676.

Respectfully submitted,
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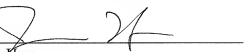
Dated: 8/9/07 By: 

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